SEQUENCE LISTING

- (1) GENERAL INFORMATION:
 - (i) APPLICANT: Collmer, Alan Charkowski, Amy Alfano, James R.
 - (ii) TITLE OF INVENTION: HYPERSENSITIVE RESPONSE ELICITOR FROM PSEUDOMONAS SYRINGAE AND ITS USE
 - (iii) NUMBER OF SEQUENCES: 8
 - (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Nixon, Hargrave, Devans & Doyle LLP
 - (B) STREET: P.O. Box 1051, Clinton Square
 - (C) CITY: Rochester
 - (D) STATE: New York
 - (E) COUNTRY: U.S.A.
 - (F) ZIP: 14603
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy\disk
 - (B) COMPUTER: IBM PC comparible

 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
 - (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE:
 - (C) CLASSIFICATION:
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US $60/055 \times 107$
 - (B) FILING DATE: 06-AUG-1997
 - (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Goldman, Michael L.
 - (B) REGISTRATION NUMBER: 30,727
 - (C) REFERENCE/DOCKET NUMBER: 19603/1743
 - (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: (716) 263-1304
 - (B) TELEFAX: (716) 263-1600
- (2) INFORMATION FOR SEQ ID NO:1:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1729 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - .(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

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TCCACTTCGC '	TGATTTTGAA	ATTGGCAGAT	TCATAGAAAC	GTTCAGGTGT	GGAAATCAGG	60
CTGAGTGCGC .	AGATTTCGTT	GATAAGGGTG	TGGTACTGGT	CATTGTTGGT	CATTTCAAGG	120
CCTCTGAGTG	CGGTGCGGAG	CAATACCAGT	CTTCCTGCTG	GCGTGTGCAC	ACTGAGTCGC	180
AGGCATAGGC	ATTTCAGTTC	CTTGCGTTGG	TTGGGCATAT	AAAAAAAGGA	ACTTTTAAAA	240
ACAGTGCAAT	GAGATGCCGG	CAAAACGGGA	ACCGGTCGCT	GCGCTTTGCC	ACTCACTTCG	300
AGCAAGCTCA	ACCCCAAACA	TCCACATCCC	TATCGAACGG	ACAGCGATAC	GGCCACTTGC	360
TCTGGTAAAC	CCTGGAGCTG	GCGTCGGTCC	AATTGCCCAC	TTAGCGAGGT	AACGCAGCAT	420
GAGCATCGGC	ATCACACCCC	GGCCGCAACA	GACCACCACG	CCACTCGATT	TTTCGGCGCT	480
AAGCGGCAAG	AGTCCTCAAC	CAAACACGTT	CGGCGAGCAG	AACACTCAGC	AAGCGATCGA	540
CCCGAGTGCA	CTGTTGTTCG	GCAGCGACAC	ACAGAAAGAC	GTCAACTTCG	GCACGCCCGA	600
CAGCACCGTC	CAGAATCCGC	AGGACGCCAG	CAAGCCCAAC	GACAGCCAGT	CCAACATCGC	660
TAAATTGATC	AGTGCATTGA	TCATGTCGTT	GCTGCAGATG	CTCACCAACT	CCAATAAAAA	720
GCAGGACACC	AATCAGGAAC	AGCCTGATAG	CCAGGCTCCT	TTCCAGAACA	ACGGCGGCT	780
CGGTACACCG	TCGGCCGATA	GCGGGGGCGG	CGGTACACCG	GATGCGACAG	GTGGCGGCGG	840
CGGTGATACG	CCAAGCGCAA	CAGGCGGTGG	CGGCGGTGAT	ACTCCGACCG	CAACAGGCGG	900
TGGCGGCAGC	GGTGGCGGCG	GCACACCCAC	TGCAACAGG1	GGCGGCAGCG	GTGGCACACC	960
CACTGCAACA	GGCGGTGGCG	AGGGTGGCGT	AACACCGCA	A ATCACTCCGC	AGTTGGCCAA	1020
CCCTAACCGT	ACCTCAGGTA	CTGGCTCGGT	GTCGGACAC	C GCAGGTTCT	A CCGAGCAAGC	1080
CGGCAAGATC	AATGTGGTGA	AAGACACCAT	CAAGGTCGG	C GCTGGCGAAC	TCTTTGACGG	1140
CCACGCCGCA	ACCTTCACTG	CCGACAAAT	TATGGGTAA	C GGAGACCAG	G GCGAAAATCA	√ 1200
GAAGCCCATG	TTCGAGCTGG	CTGAAGGCG	TACGTTGAA	AATGTGAAC	TGGGTGAGAA	1260
CGAGGTCGAT	GGCATCCACG	TGAAAGCCA	A AAACGCTCA	G GAAGTCACC	A TTGACAACGT	1320
GCATGCCCAG	AACGTCGGTC	AAGACCTGA	TACGGTCAA	A GGCGAGGGA	G GCGCAGCGGT	1380
CACTAATCTG	AACATCAAGA	A ACAGCAGTG	C CAAAGGTGC	A GACGACAAG	G TTGTCCAGCT	1440
CAACGCCAAC	ACTCACTTG	A AAATCGACA	A CTTCAAGGC	C GACGATTTC	G GCACGATGGT	1500
TCGCACCAA	GGTGGCAAG	C AGTTTGATG.	A CATGAGCAT	C GAGCTGAAC	G GCATCGAAGC	1560
TAACCACGG	C AAGTTCGCC	C TGGTGAAAA	G CGACAGTGA	C GATCTGAAG	C TGGCAACGGG	1620
CAACATCGC	C ATGACCGAC	G TCAAACACG	C CTACGATAA	A ACCCAGGCA	T CGACCCAACA	1680



CACCGAGCTT TGAATCCAGA CAAGTAGCTT GAAAAAAGGG GGTGGACTC

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 424 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS:
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
- Met Ser Ile Gly Ile Thr Pro Arg Pro Gln Gln Thr Thr Thr Pro Leu
 1 5 10 15
- Asp Phe Ser Ala Leu Ser Gly Lys Ser Pro Gln Pro Asn Thr Phe Gly 20 25 30
- Glu Gln Asn Thr Gln Gln Ala Ile Asp Pro Ser Ala Leu Leu Phe Gly
 35 40 45
- Ser Asp Thr Gln Lys Asp Val Asn Phe Gly Thr Pro Asp Ser Thr Val 50 55 60
- Gln Asn Pro Gln Asp Ala Ser Lys Pro Asn Asp Ser Gln Ser Asn Ile
 65 70 75 80
- Ala Lys Leu Ile Ser Ala Leu Ile Met Ser Leu Leu Gln Met Leu Thr 85 90 95
- Asn Ser Asn Lys Lys Gln Asp Thr Asn Gln Glu Gln Pro Asp Ser Gln 100 105 110
- Ala Pro Phe Gln Asn Asn Gly Gly Leu Gly Thr Pro Ser Ala Asp Ser 115 120 125
- Gly Gly Gly Gly Thr Pro Asp Ala Thr Gly Gly Gly Gly Asp Thr
- Pro Ser Ala Thr Gly Gly Gly Gly Asp Thr Pro Thr Ala Thr Gly
 145 150 155 160
- Gly Gly Gly Ser Gly Gly Gly Gly Thr Pro Thr Ala Thr Gly Gly Gly 165 170 175
- Ser Gly Gly Thr Pro Thr Ala Thr Gly Gly Glu Gly Gly Val Thr 180 185 190
- Pro Gln Ile Thr Pro Gln Leu Ala Asn Pro Asn Arg Thr Ser Gly Thr
 195 200 205

DASGYSIB CEBSO

Gly Ser Val Ser Asp Thr Ala Gly Ser Thr Glu Gln Ala Gly Lys Ile 210 215 220

Asn Val Val Lys Asp Thr Ile Lys Val Gly Ala Gly Glu Val Phe Asp 225 230 235 240

Gly His Gly Ala Thr Phe Thr Ala Asp Lys Ser Met Gly Asn Gly Asp
245 250 255

Gln Gly Glu Ash Gln Lys Pro Met Phe Glu Leu Ala Glu Gly Ala Thr
260 265 270

Leu Lys Asn Val Asn Leu Gly Glu Asn Glu Val Asp Gly Ile His Val
275 280 285

Lys Ala Lys Asn Ala Gln Glu Val Thr Ile Asp Asn Val His Ala Gln 290 295 300

Asn Val Gly Glu Asp Leu\le Thr Val Lys Gly Glu Gly Gly Ala Ala 305 310 315 320

Val Thr Asn Leu Asn Ile Lys Asn Ser Ser Ala Lys Gly Ala Asp Asp 325 330 335

Lys Val Val Gln Leu Asn Ala Asn Thr His Leu Lys Ile Asp Asn Phe
340 345 350

Lys Ala Asp Asp Phe Gly Thr Met Val Arg Thr Asn Gly Gly Lys Gln 355 360 365

Phe Asp Asp Met Ser Ile Glu Leu Asn Gly Ile Glu Ala Asn His Gly 370 375 380

Lys Phe Ala Leu Val Lys Ser Asp Ser Asp Asp Leu Lys Leu Ala Thr 385 390 400

Gly Asn Ile Ala Met Thr Asp Val Lys His Ala Tyr Asp Lys Thr Gln
405 410 415

Ala Ser Thr Gln His Thr Glu Leu 420

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: DNA (genomic)

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:	
ATGAGGATCC AGCATCGGCA TCACACCC	28
(2) INFORMATION FOR SEQ ID NO:4:	•
 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 28 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
(ii) MOLECULE TYPE: DNA (genomic)	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:	
ATGAAAGCTT AAGCTCGGTG TGTTGGGT	28
(2) INFORMATION FOR SEQ ID NO:5:	
(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 28 base pairs(B), TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
(ii) MOLECULE TYPE: DNA (genomic)	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:	
ATGAAAGCTT GCCACCGCCT GTTGCAGT	28
(2) INFORMATION FOR SEQ ID NO:6:	
 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 28 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	N.
(ii) MOLECULE TYPE: DNA (genomic)	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:	•••
ATGAGGATCC GAGGGTGGCG TAACACCG	28

32

28

<i>\</i> .	- 41 -	•
2) INFOR	RMATION FOR SEQ ID NO:7:	
(i)	SEQUENCE CHARACTERISTICS (A) LENGTH: 32 base pai (B) TYPE: nucleic acid (C) STRANDEDNESS: singl (D) TOPOLOGY: linear	rs
(ii)	MOLECULE TYPE: DNA (geno	mic)
(xi)	SEQUENCE DESCRIPTION: SE	Q ID NO:7:
CATCGATG	G TGGTGGCGAT AGCTAGACTT GG	
(2) INFO	RMATION FOR SEQ ID NO:8:	
(i)	SEQUENCE CHARACTERISTICS (A) LENGTH: 28 base pai (B) TYPE: nucleic acid (C) STRANDEDNESS: Single	rs

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

CCATCGATGG TCTCGTGATG GCAGGTTG

(xi) SEQUENCE DESCRIPTION: SEQ \ID NO:8: